

**CLIMATE CHANGE COMMISSION
CITY AND COUNTY OF HONOLULU**

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February 27, 2020

The Honorable Ron Menor, Chair
and Members
Committee on Zoning, Planning and Housing
Honolulu City Council
530 South King Street, Room 202
Honolulu, Hawaii 96813

Dear Chair Menor and Councilmembers:

**SUBJECT: Bill 25 (2019) – Relating to the Adoption of the State Energy
Conservation Code**

The City and County of Honolulu ("City") Climate Change Commission ("Commission") supports Councilmember Brandon Elefante's proposed Bill 25 (2019) CD2, which adopts the State Energy Code, 2015 International Energy Conservation Code (IECC), with local amendments.

As the City and other stakeholders continue to pursue energy efficiency, renewable energy, and climate resilience goals, it is imperative to update our energy codes to the latest technical standards. According to the City's recently established greenhouse gas inventory, residential, commercial, and industrial buildings are responsible for 37% of the City's carbon pollution. The 2015 IECC addresses numerous energy efficiency improvements that will reduce greenhouse gas emissions and improve long-term affordability for residents. Building codes are an important component of any greenhouse gas mitigation strategy because they address an "energy efficiency gap." Namely, this is the difference in the long-term cost minimizing level of energy efficiency in comparison to what is often actually realized. As our energy system evolves towards the State target of carbon neutrality by 2045, the 2015 IECC with local amendments proposed by the Administration enables more cost-effective implementation.

The newly included Tropical Climate Zone option in the 2015 IECC is a notable reason why this update is so impactful to the City. This option flexibly allows for residences to be built in a manner that allows for greater efficiency and comfort in O'ahu's unique tropical island environment. Compliance with the Tropical Climate Zone

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option has been estimated to result in up to 48% energy savings (estimate presented by Hawai'i State Energy Office, May 2017, available: http://www.hawaiiicleanenergyinitiative.org/wp-content/uploads/2017/04/2_HowardWiig_May2017.pdf).

The Commission also applauds the City's effort to align with the State and encourage technologies that reduce our energy consumption and reliance on imported fossil fuels within the Energy Code. Based on the City's abundant and consistent sunshine, a solar hot water (SHW) heater is the most climate friendly solution to heat water for single family homes. Over the course of 15 years, according to estimates by the City's Office of Climate Change, Sustainability and Resiliency, a SHW heater will avoid as much as 29 metric tons of carbon pollution, or the equivalent of 67 barrels of imported oil per household, compared to a standard grid resistance water heater. It will also result in savings of up to \$8,684 per household over the expected life of the equipment.

Finally, as the City transitions to renewable sources of energy for transportation, it is essential that codes allow for innovation and investment in infrastructure to support the transition. Retrofitting existing facilities to accommodate electric vehicle (EV) charging infrastructure can be costly. The EV readiness provisions proposed provide flexible alternatives to meeting EV charging needs, as well as account for charging time (Levels 2 and 3) as important components to supporting EV adoption. Preparing for large-scale adoption of EVs is an important step towards achieving the City's GHG reduction goals, assuming they are paired with increasing levels of renewable energy.

Thank you for the opportunity to submit comments in support Bill 25 (2019). The Climate Change Commission urges you to support them as proposed by Councilmember Elefante. Should you have any questions, please feel free to contact me at makenaka@hawaii.edu or (808) 956-2890.

Sincerely,

A handwritten signature in dark ink, appearing to read "Makena Coffman", with a stylized flourish at the end.

Makena Coffman, Ph.D.
Chair